SEPTAGE MANAGEMENT CHALLENGES AND OPPORTUNITIES IN UTTARAKHAND:

State consultation meet on Co-treatment at Sewage Treatment Plant (STP) and Technology Options for Faecal Sludge Treatment Plant (FSTP)

29th November, 2019  Hotel Four Point by Sheraton, Dehradun

Swachh Bharat Mission has successfully addressed open defecation in India and has paved the way for addressing the second generation urban sanitation challenges of managing septage and waste water.

Majority of Indian cities are still without sewerage systems. Treating septage waste through decentralised and non-sewered sanitation systems remains a high priority for Indian cities. Our towns are growing, and not all can be connected to centralised STPs. Hence every town needs both non-sewered Septage Treatment Plants as well as Sewage Treatment Plants – to ensure 100% treatment of faecal waste generated.

Uttarakhand is a hilly state comprising 90 Urban Local Bodies. The state generates 288 MLD of waste water out of which only 116 MLD is treated by current STPs. Under the National Mission for Clean Ganga (NMCG), Uttarakhand has committed to set up more STPs to address the urban sanitation challenges of 11 towns.

Constructing sewerage systems in Uttarakhand is challenging due to hilly terrain and high ground water table (Terai region). Moreover, high capital cost is associated with laying of sewer pipelines and it takes many years to complete, connecting households to sewer lines is a major constraint as old households have existing septic tanks and toilets are located in remote corners which are inaccessible. Hence STPs are seldom fully operational nor fully utilised.

As per the current estimates (2018 population), Uttarakhand generates a total of 722 KLD of Septage (based on per capita daily estimates) and only 22% is currently treated through the STPs.

National Institute of Urban Affairs (NIUA) is supporting the Urban Development Department and Pey Jal Nigam of Uttarakhand for addressing septage management challenges. Scientific and appropriate Co-Treatment of Septage at 13 STPs in the state can lead to a 25% increase in treatment of septage generated. An additional 20% of septage can be treated through setting up of Septage Treatment Plants.

NIUA is anchoring a national level Sanitation Capacity Building Platform (SCBP) for promoting decentralised and non-sewered sanitation solutions. NIUA the apex research body working for the Ministry of Housing and Urban Affairs (MoHUA), Government of India. In February, 2019, NIUA has signed an MoU with Urban Development Directorate, Uttarakhand for supporting Septage Management through technical assistance, capacity building and advocacy.

Purpose of Workshop:
The one day State consultation meet is organised with a thematic learning focus on co-treatment of septage at existing STPs in the state of Uttarakhand. IIT Roorkee has recently completed a research on exploring the co-treatment potential of treating septage at 9 STPs in Uttarakhand. The results of this study will be shared along with successful experience from other states/cities that have been undertaking co treatment of septage with sewage at their STPs. The afternoon session will be in an exhibition cum presentation format where vendors will present different technology options for setting up Faecal Sludge Treatment Plants.

Participants: Urban Local Bodies, Pey Jal Nigam, Jal Sansthan, Universities and State Nodal Training Institutes of Uttarakhand
# AGENDA

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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>09:30 – 10:00</td>
<td><strong>Registration</strong></td>
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<td>10:00 – 10:30</td>
<td><strong>Welcome Address:</strong> Shri Hitesh Vaidya, Director, NIUA</td>
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<td><strong>Inaugural Address:</strong> Shri A.S. Hayanki IAS, Secretary, Peyjal Uttarakhand</td>
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<td><strong>Launch:</strong> (i) Orientation Training Module on FSSM</td>
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<td>(ii) Flyer on Status and Opportunities in Septage Management: Urban Uttarakhand</td>
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**SESSION I**  
10.30 – 11:30

- **What is Co-treatment?**  
  Presenter: National Institute of Urban Affairs (NIUA)
- **Study Findings:** Co-treatment of septage at STPs in Uttarakhand  
  Presenter: Dr. Ankur Rajpal, IIT Roorkee
- **Concluding Remarks:** Shri Uday Raj, Project Director, SPMG, Uttarakhand

**Tea Break**
11:30 – 12:00

**SESSION II – Successful Sewage- Septage Co-treatment Experiences in India**
12:00 – 13:30

- **Odisha**  
  Presenter: Shri Binod Kumar Sahoo, Project Director, OWSSB, Odisha
- **Telengana and Andhra Pradesh**  
  Presenter: Shri G. Bala Subramanyam ASCI, Hyderabad
- **Tamil Nadu**  
  Presenter: Shri Senthil Kumar G, IIHS, Tamil Nadu
- **Uttarakhand: Context and Priorities for Septage Management**  
  Presenter: Shri Ravi Kumar Pandey, Suprintendent Engineer, Urban Development Directorate, Govt. of Uttarakhand
- **Panel Discussion Chair:** Shri Depinder Singh Kapur, NIUA

**Lunch**
13:30 – 14:30

**SESSION III – Faecal Sludge Treatment Technology Options**
14:30 – 15:30

- **Pyrolysis and Non-thermal semi-mechanized treatment**  
  Presenter: Tide Technocrats
- **Mechanised Treatment**  
  Presenter: WAM India Pvt. Ltd.
- **Omni Processor**  
  Presenter: Ankur Omni Scientific

**Tea Break**
15:30 – 16:00

**SESSION III CONTINUED**
16:00 – 17:00

- **Small Cesspool trucks with double booster pump**  
  Presenter: Maniar & Co.
- **Hybrid treatment system**  
  Presenter: Sarvo Group
- **Soil Bio Technology**  
  Presenter: Vision Earth Care P. Ltd.
- **Closing Remarks:** Shri Vinod Kumar Suman, IAS, Director Urban Development Directorate, Govt. of Uttarakhand